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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CORDRAY, DENNIS R

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,017

Applicant(s)

CHOU ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-230 is/are pending in the application.
- 4a) Of the above claim(s) 1-118, 154-167 and 195-229 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 119-153, 168-194 and 230 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/10/04, 8/17/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

This is a first action on the merits of Application SN 10/676,017.

Election/Restrictions

Applicant's election with traverse of the invention of Group II (method), claims 119-153 and 168-194, in the reply filed on 2 October, 2005 is acknowledged. The traversal is on the ground(s) that there is not a serious burden on the examiner to examine Groups I (products), II and III (apparatus) because

a. the search for the subject matter in Groups I, II and III would overlap at least partially as each independent claim in each Group recites, *Inter alia*, a thermally bondable fiber exhibiting hydrophilicity, and

b. the search for Groups II and III would have to overlap at least to some extent since the inventions for both Groups are classified in class 162, regardless of the particular subclass.

This is not found persuasive because the classification of inventions into different classes and subclasses indicates that the inventions have acquired a separate status in the art and thus require different searches for the claims thereof. In addition to the particular classification for the invention of each Group, numerous additional classes and subclasses must be searched to address the dependent claims for each Group. There is little overlap in the search within the main classification for each Group, and no overlap in the additional (sub)classes that must be searched, thus the burden of examining the multiple inventions in the instant application is substantial.

The requirement is still deemed proper and is therefore made FINAL.

Comment

Claim 230 was inadvertently lumped with claims 208-229, which are drawn to a nonelected invention. Claim 230 is dependent on the elected invention of claims 168-194 and will be included in the examination of those claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 123 and 172 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 123 and 172 recite the limitation "wet-strength resin" in claims 122 and 171 respectively. There is insufficient antecedent basis for this limitation in the claim as claims 122 and 171 recite "wet strength adjusting agent."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 168-169, 171-177, 179-180, 183-186, 188-194 and 230 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt et al (EP 0810078).

Claims 168-169, 183, 191, and 230: Schmidt et al discloses a method for making a fluid distribution material comprising

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a. providing an aqueous slurry of fibers including cellulosic wood fibers (p 4, lines 3-15 and p 5, lines 14-15), thermally bondable fibers (p 5, lines 41-42), preferably hydrophilic (p 6, lines 13-14), that can be bi-component or tri-component fibers (p 5, lines 57-58)

b. depositing the fibers simultaneously on a wire and forming the fibers into a nascent web (p 7, lines 1-2)

c. drying the web (p 7, line 2)

d. embossing the web (p 7, lines 29-32)

e. heat treating the web at a temperature of from 75 to 175 °C (167 – 347 °F) (p 8, lines 39-44 and p 6, lines 5-7).

Claims 171-175: Schmidt et al discloses that wet and dry strength agents can be added (page 6, lines 22-24, 27-28), including polyamide-epichlorohydrin, urea-formaldehyde, melamine-formaldehyde, polyacrylamide and polyacrylamide-glyoxal resins; starch; C₂-C₈ dialdehydes; glutaraldehyde; and glyoxal (p 4, lines 31-35 and 45-49).

Claims 176-177, 179-180: Schmidt et al discloses that the web can be wet pressed (page 7, lines 12-13) or subjected to through air drying (page 7, lines 18-19). Schmidt et al also discloses that the web is creped from a Yankee dryer (page 7, lines 21-22).

Claims 184-186: Schmidt et al discloses that the bi-component or tri-component thermally bondable fiber can comprise polyethylene, polypropylene or polyesters. Schmidt et al also discloses that a suitable fiber is available under the tradename

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CELBOND® (p 6, lines 1-2, 14), which is also cited as an appropriate fiber on page 14 of the instant specification. Schmidt et al further discloses that the fibers can be made hydrophilic by applying a surfactant (p 3, lines 51-52).

Claims 188-190 and 192-194: Schmidt et al discloses that the thermally bondable fibers are present in an amount from 0 to 50% with a preferred range of from 5 to 25% (p 5, lines 49-51). Schmidt et al also discloses that the length of the fibers can be from 0.1 to 6 cm (1 to 60 mm) and that a preferred range is from 0.3 to 30 cm (3-30 mm) (p 6, lines 15-16). The above composition and length ranges encompass and thus anticipate the claimed ranges.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 119-120, 122-128, 130-131, 134-141, 143-153, 178, and 182 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al in view of Oku et al (5254399).

Schmidt et al does not disclose that the method includes a line speed in excess of 1000 ft/min.

Oku et al teaches that a wet-laid former can run at a speed of 500 m/min or more (col 6, lines 66-67). It would have been obvious to a person of ordinary skill in the art at

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the time of the invention to form the web in the process of Schmidt et al in view of Oku et al at a speed of at least 1000 ft/min to maximize the output of the process.

4. Claims 121, 129, 133, 170, 178, and 182 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al in view of Oku et al and further in view of Anderson et al (WO 96/12615).

Schmidt et al and Oku et al do not disclose that the papermaking fibers and thermally bondable fibers are dispersed sequentially or that the fibers in the web are stratified.

Anderson et al disclose a method of making a wet-laid bonded fibrous web containing bi-component fibers and cellulosic fibers (abstract). Anderson et al discloses that the papermaking and bi-component fibers can be added separately to make a stratified web with a central layer having mostly bi-component fibers and outer layers having mostly cellulosic fibers (p 8, lines 13-20). Anderson also discloses that the stratified web has an abrasion resistant outer layer as well as a high strength and total absorption capability in the core (p 7, lines 3-10 and 19-25).

The art of Schmidt et al, Oku et al, Anderson et al and the instant invention are analogous as they pertain to methods of making wet-laid fibrous webs. It would have been obvious to a person of ordinary skill in the art at the time of the invention to form a stratified web by adding the papermaking fibers and thermally bondable fibers separately in the process of Schmidt et al in view of Oku et al and further in view of Anderson et al to maximize the abrasion resistance, strength and absorption properties of the web.

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5. Claims 132 and 181 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al in view of Oku et al and further in view of Batra et al (6162327).

Schmidt et al and Oku et al do not disclose that the web can be uncreped.

Batra et al disclose a tissue paper produce comprising cellulosic and optionally synthetic fibers (col 2, lines 39-42) that can be made by through air drying (col 2, lines 62-63). Batra et al also discloses that the tissue paper can be creped, uncreped or microcreped (col 2, lines 46-48).

The art of Schmidt et al, Oku et al, Batra et al and the instant invention are analogous as they pertain to methods of making wet-laid fibrous webs. It would have been obvious to a person of ordinary skill in the art at the time of the invention to make an uncreped product in the process of Schmidt et al in view of Oku et al and further in view of Batra et al as a functionally equivalent option.

6. Claims 142 and 187 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al in view of Oku et al and further in view of Nielsen et al (EP 0465203 A1).

Schmidt et al and Oku et al do not disclose that the surfactant is nonionic.

Nielsen et al disclose a method of making a wet-laid bonded fibrous web containing bi-component fibers and cellulosic fibers (abstract). Nielsen et al further disclose that a nonionic dispersing agent can be added to modify the surface of the fibers to make them hydrophilic (p 5, lines 42-52).

The art of Schmidt et al, Oku et al, Nielsen et al and the instant invention are analogous as they pertain to methods of making wet-laid fibrous webs. It would have

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been obvious to a person of ordinary skill in the art at the time of the invention to use a nonionic surfactant in the process of Schmidt et al in view of Oku et al and further in view of Nielsen et al to make the fibers hydrophilic.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Yeo et al (6096015), Schmidt et al (6355200)]. They disclose other absorbent processes using thermally bondable fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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